Sierra Club San Diego Chapter
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May 28, 2002

California Regional Water Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Subject: Resolution No. R9-20001-0123 Basin Plan Amendment for
Total Maximum Daily Load for Diazinon in Chollas Creek Watershed
San Diego County

Dear Chairman Minan and Members of the Board:

We commend the Staff for conducting the May 17, 2002 public workshop on the total maximum daily load (TMDL) for the diazinon in the Chollas Creek watershed. The information provided and exchange of comments at this workshop has been useful to us.

The Tentative Resolution sets the numeric targets for diazinon based on the California Department of Fish and Game report[1] to protect aquatic life. However, the staff report does not provide data to show that these numeric targets protect the wildlife (mammals and birds) that can be exposed to the toxin via dermal and oral pathways as they forage in the riparian habitat of Chollas Creek. It is known that diazinon can bioaccumulate in aquatic life. The paper provided by in the staff report by Larkin and Tjeedema[2] cite references that diazinon biomagnifies in aquatic animals with bioconcentration factors in the range up from below one to over 2000, dependent on the species. This fact can put foraging mammals and birds, being higher in the food chain, at unacceptable risks from the toxic effects of diazinon. Children no doubt have and will continue to play in and around the Chollas Creek and come in direct contact with the waters in this creek. Have the numeric targets been determined to protect of the wildlife and children from these exposure pathways? The report should be amended to provide this analysis.

The staff report notes that diazinon degradates can be more toxic (diazoxon) and more persistent and mobile in the soil (oxyprimidine) that the parent diazinon. Did the determination of the numeric targets for diazinon take these factors into consideration? The Toxic Inventory Evaluation for Chollas Creek does not indicate that these and other diazinon degradates were measured. The concern is that compliance with the numeric targets for diazinon still leaves open the question whether or not the concentration of the degradates will be sufficiently low to comply with the Basin Plan toxicity objective.

The TMDL process for diazinon focuses on the water quality of the receiving watershed. However, there are other various pathways by which this toxic pesticide can cause harm to human health and the environment Direct human and wildlife contact with lawns and other forms of vegetation

[1] Seipmann, Stella and Brian Finlayson "Water Quality Criteria for Diazinon and Chlorpyrifos", Calif. Dept. Fish and Game April 26, 2002
[2] Larkin and Tjeedema, "Fate and Effects of Diazinon", Review Environmental Toxicology 166:49-82

treated with the pesticide are examples. This pathway is especially critical to birds and bees as they are highly susceptible to diazinon. Diazinon can enter the watershed not only via groundwater transport and urban runoff but also via the atmosphere.[3] The point we wish to make here is that the implementation plan to achieve the reductions in the diazinon concentration in the Chollas Creek must also address the source control of the toxin. The concern is that the emphasis might be placed on structural Best Management Practices (BMPs) to treat the contaminated runoff but in so doing fail to protect the health of humans and the ecosystem from the other non-water pathways. Consequently, we must emphasize the need to place the highest priority on source reduction of diazinon.

Public education must play a major role to reduce and ultimately eliminate the use of diazinon even before the EPA phase-out period. The public needs to be informed of the highly toxic nature of diazinon and provided with alternative, safer, pest control methods. The public should to be encouraged discontinue the use of diazinon and to properly dispose unused diazinon. Integrated pest management (IPM) needs to be vigorously pursued.

The current federal TMDL program does not specify the time period to achieve the TMDL for an impaired water body. However, the pending TMDL program sets, in general, a ten-year schedule. The four-year phase out schedule for diazinon and the anticipated stockpiling of this pesticide prior to the phase out presents a real challenge to meet the diazinon numeric target within ten years. We strongly recommend that the RWQCB and the copermittees work to achieve the ten-year time period to achieve the diazinon numeric targets for Chollas Creek.

The recently reported Chollas Creek enhancement program[4] can provide an excellent opportunity for the copermittees to promote the public awareness of need for IPM and other non-toxic pest control methods to assist in achieving the goals of this program as well as in meeting the ten-year schedule for the diazinon numeric targets.

There is some question concerning whether diazinon will accumulate in the sediment to a concentration harmful to the benthos. This matter was discussed at the May workshop. The Basin Plan Pesticide Objective states: “No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses.” To help resolve this issue, we recommend that the Chollas Creek sediments be monitored for diazinon and its degradates. We believe it is essential to assess the sediment quality and the benthos in order to restore Chollas Creek to a healthy sustainable ecosystem. This sediment monitoring could also be conducted with sediment monitoring for the metals copper and zinc if the sediment has not yet been assessed for the these metals.

Thank you for this opportunity to provide comments on the diazinon TMDL for Chollas Creek.

Sincerely,

Ed Kimura
Chair, Water Subcommittee
Sierra Club, San Diego Chapter

[3] See Storm Water Center “Urban Pesticides: From Lawn to the Stream”
http://www.stormwatercenter.net/Practice/5-Urban%20Pesticides.pdf
[4] Ensor, Deborah, “$1.23 Million Ok’d for Chollas Creek Program” San Diego Union Tribune, May 15, 2002